ESROS: Base Source

MobileMsgWare Developer Tool

Efficient Short Remote Operation Services

ESROS Base Source from Neda Communications is portable source code for ESROS layer implementation. The ESROS layer is suitable for special purpose transaction devices, and when combined with the EMSD-P&FS layer it can be used to create a fully-functional EMSD messaging device. ESROS has been designed to meet the needs of wireless application developers and device and chip manufacturers for wireless devices.

ESROS Features

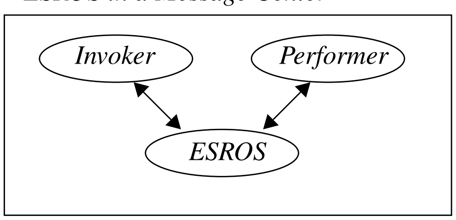
- **Neda Source Code Standards**

  Designed from the outset to be as portable as possible, Neda's ESROS Base Source was written entirely in portable C. It was tested and verified using industry standard tools. It has been compiled on a large set of compilers and executed on Unix, DOS and Windows platforms throughout its development.

- **ESROS code has been designed for use in Message Centers or Devices**

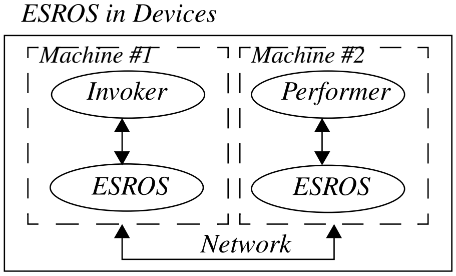
  EMSD message centers need to be able to accommodate large volumes of messages, at high speeds via multiple, simultaneous access points.

ESROS in a Message Center



EMSD Devices need to have a very small code base and be very attentive to required air-time and battery utilization.

ESROS in Devices



ESROS Base Source is capable of handling the complexity of large scale, industrial strength message centers, and it can meet the performance, scalability, and efficiency requirements of small handheld devices.

- **Conformance to Industry Standards**

  ESROS Base Source fully implements the ESROS Protocol Specifications. Neda's implementation of ESROS has gone through extensive conformance, interoperability and stress testing.

- **2-Way and 3-Way Handshake**

  ESROS applications can be built to emphasize efficiency using the 2-Way Handshake or to emphasize reliability using the 3-Way Handshake.

- **Single or Multiple Process**

  ESROS can be implemented as a stand-alone process, or it can be joined with another function, such as EMSD-P&FS to form a single process.

- **Compile and Run Time Parameters**

  In order to meet the demands of different environments there are many options that can be configured either when compiling or at runtime.

ESROS Benefits

- **Powerful**

  ESROS Base Source can handle messaging and other standard networking operations. It is highly-optimized for wireless applications, such as Efficient Mail Submission & Delivery (EMSD) systems, and can be used to develop new wireless applications such as credit card authorization, status notification, or directory services.

- **Flexible**

  ESROS Base Source can accommodate varying size processors, from small, hand-held messaging devices to large, complex message centers. It is implemented using a highly-extensible architecture, supports both a function call API and call back API, and both blocking and non-blocking function call APIs.

- **Efficient**

  ESROS Base Source implements the ESRO protocols to ensure minimal transmission costs. Both the ESRO specifications and the implementation of the ESROS Base Source focus on the use of small, handheld devices. It uses a bandwidth efficient architecture in terms of CPU processing capability, memory capacity, and battery power consumption.

- **Compatible**

  ESROS Base Source implements the complete set of functions for the Efficient ShortRemote Operations Protocol. It communicates with EMSD message centers, operates on a variety of platforms, and interoperates with all modules on the Open C Platform.

- **User Friendly**

  ESROS Base Source is fully supported in the Open C Platform with its standard link library functions.

- **Adaptable**

  ESROS Base Source allows for easy integration with new applications like Credit Card Authorization, Status Notification and Directory Services. It is also out-of-the-box compilable on DOS, MS Windows 3.x and many Unix Operating Systems.

ESROS Components

- **Efficient Remote Operation Protocol Engine**

  ESROS Base Source includes a full implementation of the Efficient Remote Operation Protocol (EROP) engine. It provides full access to EROP functionality, including EROP Action Primitives, Event Primitives, SAP Management, the Network Management Interface, and Transport SAP Management.

- **Function Call API**

  Requests and responses are communicated via function calls (blocking or non-blocking). Results, error and failure indications are delivered to the ESROS user in an event structure.

- **Call Back Function API**

  Requests are issued through function calls. Call back functions associated with ESROS events are passed to ESROS at the time of ESROS SAP activation.

- **ESRO Protocol Engine**

  The Neda ESRO Protocol Engine (EROPE) is the Neda Communications implementation of the ESRO protocol.

  The EROPE is designed to be independent of the operating environment. EROPE uses the set of common facilities available with Neda Communications' Open C Platform.

  The EROPE Services offer the means to perform an *Operation* with another EROPE-User for the purpose of exchanging ESROS Data Units.

Neda Communications, Inc.

- **Open C Platform**

  The entire sources are built on this extremely flexible framework, which isolates all the communication layers from the underlying system. Once the Open C Platform is customized for a new computer platform, all other Neda protocol layer components are ready for execution on the same platform.

- **Portation Support Service**

  Neda's experienced personnel can shorten your development cycle even further by providing skilled service to get your development group up and running with this new technology.

- **Software Maintenance Service**

  Once up and running, the Neda Communications Software Maintenance service provides the assurance that your development team will stay current with the latest evolution of the EMSD specifications. The Neda staff has been instrumental in the establishment of the EMSD specifications and of the EMSD industry. With the Neda Communications Software Maintenance Service, you have the most knowledgeable Efficient Mail Submission & Delivery technical expertise on your side!

- **Related Products from Neda**

  Other products available from Neda Communications include the following:

  - *Enhanced Two-Way Paging (ETWP) Products*
  - *Reference Message Center*

  Source code for devices is also available:

  - *ESROS Test Tools Source*
  - *EMSD-P&FS Base Source*

- **Ordering Information**

  Please refer to the following part number when ordering this product: ESROS-BASE-SRC-CUR

  Where "CUR" indicates the current shipping version of the product. To order a specific release of this product, replace "CUR" with "x.x" where x.x is the particular release number.

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From field tested protocol components, to industry recognized expertise, the Neda Communications EMSDDevice Development Toolkit is your complete solution to EMSDproduct success!

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